Catholic and Malthusian: the entrepreneurs of tourcoing in the nineteenth century

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Catholic and Malthusian: the Entrepreneurs of Tourcoing in the Nineteenth Century

Béatrice Craig [*]

La pratique religieuse et la foi ne sont pas parvenues à enrayer l'évolution démographique qui n'a cessé au cours du XIXe et du XXe siècle de comprimer les taux de natalité. Cette réduction de la fécondité n'est pas imputable à un déclin des croyances. Une société plus religieuse n'y aurait pas échappé.[1] (Ariès 1971: 321)

Abstract: The Religion is a factor expected to influence demographic behaviour. The Catholic Church's long standing opposition to contraception for instance should have made it difficult for couples to control the size of their family, and they are often assumed to have had larger than average ones. Since the work of Landes (1976), large families reflecting the groups intense Catholicism have been described as one of the reasons behind northern France's rapid industrialization in the nineteenth century. A study of the demographic behaviour of the industrialists however reveals that this socio-economic group limited the size of its descendence in response to economic constraint. Although religion probably had an impact on their fertility, it did not determine it.

Like Aries, demographers and population historians have noted that in the nineteenth century, the fertility of practising French Catholics followed the same downward trend as the one of the rest of the population, although with a

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[1] "Neither religious practice nor Faith could put an end to the demographic evolution that led to a decline in natality rates in the nineteenth and twentieth century. This fertility decline was not a consequence of weaker religious convictions. A more religious society would not have escaped the trend either."

lag. There were exceptions to this general rule: families which produced priests and nuns were one of them. The textile entrepreneurs of the Lille area are often described as another such exception. In France, the fertility decline was more pronounced among the bourgeoisie, described as « sereinement malthusiens dans les mots et dans les faits» (Bardet 1988 : 368)[2]. But all regional historians describe the "patrons du Nord" as fathers of large, and even very large families, sometimes including 10 or 12 children. Their attachment to their religion is given as a cause for their fertility, and this, in turn would have propelled the massive industrialization of the region. All those children had to be established, and fathers were determined to provide all their sons with their own business. Over the years, religion, fertility and the region's industrial growth have become inextricably linked in the writing of historians (Fohlen 1956b; Lambert-Dansette 1954; Landes 1976; Hirsch 1991; Verley 1994; Pouchain 1998; Bonte 2002; Daumas 2004). But is this image of a very Catholic and very prolific industrial class accurate? Its Catholicism has been well demonstrated; its high fertility levels and indifference to the sirens of family limitation much less so, and if empirical data does not support this second proposition, the link between religion and fertility in France may need to be re-evaluated.

Catholicism and Fecundity. Nature of the Problem

There is no doubt that the industrialists of the Lille area were massively practicing Catholics. National studies by Le Goff and Remond (1991), Cholvy and Hilaire (2000), and Cholvy (2001) describe the departments of the Nord and Pas de Calais and the Lyon area as two of the poles of nineteenth century French Catholicism. In both regions, the bourgeoisie, especially the manufacturing and industrial middle class played a key role in religious life. In the Nord, it was instrumental in the development of an *Eglise des Oeuvres* (a Church emphasizing good work by clerical and lay organizations alike). The bourgeoisie of the Nord was not religiously homogeneous. Pierrard's work on the bishopric of Cambrai (1978), and Menager's on the political life of the Nord (1983), both delineate a varied spatial and social geography. The northern part of the bishopric and of the department (down to and including Lille) was the profoundly Catholic one. A liberal and anti-clerical middle class could be found in Lille itself, but it drew its members from the ranks of the petty middle class (craftsmen and retailers), of the professions, of the journalists, and from immigrants to the area. The merchant traders and factory owners who controlled the textile and food industries were on the other hand solidly Catholic. They were the ones who, at the end of the century, belonged to the numerous

[2] "Quietly malthusians in words and action."

sociétés civiles (non profit organizations) which were set up to supervise the *oeuvres*[3].

This religious fervour was relatively recent. The Bourgeoisie of the Nord came back to the Faith during the July Monarchy (Cholvy 2001:102-105). Its return was solidified during the Second Empire thanks to the legalization and expansion of Catholic secondary education (in 1863, Catholic secondary schools taught almost half the secondary school age boys in the department) and to the beginning of a Catholic press. (The conservative *Journal de Roubaix* was started in 1856, and reflected the views of the manufacturers of Roubaix and Tourcoing) (Pierrard 1978: 239). After the Second Empire fell, an all encompassing Catholic world took shape locally, largely underwritten by the area's manufacturers. The development and expansion of the *oeuvres* - associations to promote lay piety, to spread and defend Catholicism, or to pursue social, educational and welfare goals - date mostly from this period, and their number increased as the Third Republic became more and more anti-clerical. The first Catholic Committee for the Defence of Religion was founded in Lille in 1871; it was an umbrella organization which regrouped a multiplicity of organizations with varied and usually very specific aims. This committee, urged by the thread manufacturer Philibert Vrau who put up most of the money, founded the Catholic Faculties (law, letters, science, medicine and theology) between 1875 and 1877. It also organized an annual meeting under the name *Assemblée générale des catholiques du Nord Pas de Calais* from 1873 onwards (Pierrard 1978: 231, 254-256; 265-66; 274-76; 285). The local Catholic press acquired new titles: la *Vraie France* in 1878 and la *Croix du Nord* in 1889. Almost half the shareholders of the first one were industrialists or merchant traders. The second was supported by Vrau's nephew, Paul Feron-Vrau (Visse). In 1884, Philibert Vrau's brother in law, Camille Feron Vrau founded the *Association catholique des patrons du Nord*. This organization never had many members, but it acted as a think tanks and organized retreats for those who were interested, whether members or not (Talmy 1962).

An educational system encompassing all levels, a Catholic press, the Catholic committees and other associations, and the *Assemblée générales des catholiques du Nord-pas de Calais* all participated in the development of a regional Catholic consciousness. All those institutions supported each other. They also contributed to shelter this bourgeoisie inside an all encompassing ideological system (Pouchain 1998; Bonte 2002). As regional historian Pierre

[3] For instance, the *société civile des oeuvres paroissiales de St Christophe de Tourcoing*, founded in 1886, was made of 5 spinners, a manufacturer, an architect and a landowner. The *société civile du Sacré Coeur de Tourcoing* (youth club, school, sewing circle, crèches and other catholic activities promoting charity, benevolence, labour and prayers) was founded two years later and included four landowners, four spinners, a merchant trader and a white collar worker. The *société civile de l'orphelinat Saint Vincent de Paul de Tourcoing* (1893) was made of a landowner, a spinner, an architect, a merchant trader, an industrial dyer and two industrialists..

Pouchain stated « Les grands collèges catholiques de la région lilloise commencèrent à forger vers 1840, de nouvelles générations d'entrepreneurs dont ils amplifiaient s'il était possible, les convictions religieuses et les réflexes sociaux. » [4] (Pouchain 1998:118).

Young men were graduating from those colleges or from the Catholic university very ill equipped not to believe, and very well equipped to counter the arguments of liberals and non believers (apologetic was taught in secondary schools). Moreover, this vision of a world divided between Catholics and the rest was shared by almost every member of their family and social networks, and to reject the one was tantamount to rejecting the others. The Roubaix industrialist Alfred Motte, although a good Catholic, learned this at his expense. In 1877, he ran for office on a Republican ticket, and his family acted in concert to make him loose the election, not without telling him along the way he had signed a pact with the Devil (Pouchain 1998: 109; Hirsch 1991: 72, 80).

The entrepreneurs of the Lille area were committed Catholic. Were they really prolific? This latter image has been derived mostly from anecdotic sources such as family histories and the genealogies published in the *Annuaire des familles*, and from the calculations done by Bonnie Smith in the appendix of her book on the Middle class women of Lille (Smith 1989: 181-82). Her work has been the only attempt at quantifying the phenomenon. She drew a corpus of families from published genealogies, and concluded that the average family size among the bourgeoisie had gone from 5 children at the beginning of the century to 7 at the end. Unfortunately, she miscalculated the number of children born to one of her cohorts; the average number of children did not change through the century; it went up only among couples married at the beginning of the twentieth, but only to 6.2 (as opposed to 5.3 in the nineteenth century). Smith also did not distinguish between complete and incomplete families (the latter being the ones where husband or wife died before the woman's 45th birthday), and a decline in adult mortality could be behind the increase in the number of children, rather than an increase in fertility.

Two other studies should further incite us to be cautious. The first one is Codaccioni's work of the wealth of the Lille bourgeoisie in the nineteenth and twentieth century (Codaccioni 1976). Codaccioni used post mortem estate settlement figures, distributed by socio-economic categories, and then by wealth levels. He identifies those who left estates worth a million francs or more by names, as well as their heirs. Those people who left the biggest fortunes had very few children. The second work is a demographic study of the town of Roubaix in the eighteenth and nineteenth century using reconstitutions of a sample of families (Pétillon 1996 and 2006). Among the middle class (crafts, trade, white collar workers, civil servants) the number of children dropped from 5 to 2.7 between 1820 and 1889; among the elite (entrepreneurs,

[4] "In the 1840s, the main Catholic colleges of the Lille area began to shape a generation of entrepreneurs, and amplified their religious belief and social reflexes ».

landlords, professions), it dropped from 5.5 to 2.5 in the middle of the century, and then rose again to 3.5. Roubaix entrepreneurial families were therefore not very large, but the sample upon which this study is based is rather small (about 20 entrepreneurial families for the entire century). Were the families in those two studies anomalies? Or did the entrepreneurs of the region really have less and less children?

Tourcoing in the nineteenth century

We are going to try to answer this question using the textile entrepreneurs of Tourcoing as a case study. Tourcoing is one of the four cities of the arrondissement de Lille (Lille, Roubaix and Armentières being the others). It is located 15 km to the north east of Lille, the head town of the department since the French revolution, and 3.5 km north of Roubaix. It had been a textile production centre since the middle ages when it was annexed to France in 1668. Production was proto-industrial till the late eighteenth century. In 1789, outputters tried to escape the crisis which had recently struck the woollen industry by switching to cotton. They acquired Jennies (called here "little English machines") as early as 1790. The mule jenny appeared some ten years afterwards. Machine spinning was an indirect beneficiary of the Revolution. The closing of the convents and the confiscations of aristocratic country houses put on the market buildings large enough to accommodate mechanized workshops. On the whole, however, the Revolution had a negative impact on the local economy, and delayed economic recovery till after the fall of Napoleon in 1815. Cotton domination did not last. The economic crisis of the late 1820s convinced many spinners to abandon cotton and come back to wool, or to work both fibres. This allowed the mechanical spinning of wool to be profitable, and had machine spinning had definitively replaced hand spinning by 1846. The first steam engine was introduced in 1821; its adoption encouraged mergers and concentrations and spinning mills began to grow in size. In 1823, the average mill numbered 1853 spindles; in 1833, 2243 (AMTg, 7FIC/14; Fohlen 1956b; Chanut 1956; Toulemonde, 1966a and b; Lottin 1986; Delsalle 1985; Daviet 1987).

Manual wool combing disappeared rapidly in the wake of the 1845-48 economic crises, and the introduction of wool combing machines in 1852. Hand weaving held out longer. In 1830, all weavers, except those who manufactured carpets, worked at home on handloom. Merchant manufacturers were all outputters. Mechanical weaving did not become common till the 1860s. Contrary to what occurred in spinning and wool combing, the machines did not immediately displace the hand workers. In 1882, there were 1289 carpet weaving looms, 1464 hand looms, 300 mechanical looms, and 2407 unspecified looms in Tourcoing. Hand weaving however declined rapidly after 1880, and had almost entirely disappeared by the twentieth century (AMTg, G1C33).

In the meantime, the mills were growing larger and larger, and increasing in complexity. Either they added preparatory processes like carding and combing, or finishing ones, like twisting to spinning. Or, they integrated various phases of production (spinning and weaving for instance). Cotton mills went from 12 750 spindles in 1882 to 27 090 in 1901, and 7 440 to 15 300 for wool in the same period). However, the world of the highly skilled workers, small scale merchants and retailers which had produced spinners and manufacturers a generation earlier had not disappeared. Among them were emerging a new breed of small scale textile entrepreneurs, usually engaged in preparatory or finishing work, probably as subcontractors. Many carried out these activities alongside a more traditional one (tavern keeping for instance), and some managed to permanently integrate the ranks of the industrialists, like some of their colleagues a generation earlier. Merchant trading also evolved. A the beginning of the century, the merchant trader (*négociant*) had bought and purchased a wide range of products for his own account; at the end of the century, he was joined by a fast growing number of brokerage firms and commission traders.

Two consequences of this evolution are important for us. On the one hand, at the beginning of the century textile entrepreneurs were all merchant traders or out-putters (or both); they orchestrated the productive activities of others, but did not directly supervise them, and they found regional, national or export markets for the finished products. At the end of the century, they had become industrialists, who owned factories, organized production, managed the labour force and may entrust the marketing of their products to firms specializing in this kind of activity. In addition, the amount of financial capital required to become, or remain, a manufacturer was constantly increasing. This was reflected in the value of the assets brides and grooms from manufacturing families brought into marriage, which increased considerably. The median value, which had been 3 000 Fr for those marrying between 1820 and 1829, jumped to 20 0000 Fr for those marrying between 1859 and 1868[5]. Enrichment could have had an impact on the demographic behaviour of this group.

The method

This study relies on the one hand on the calculation of the fertility of two cohorts of couples belonging to entrepreneurial Tourcoing families, and on the

[5] Even before the Revolution, community of property was the norm in the area. At marriage, the spouses could be provided with a "dowry" by their parents. Although the term "dowry" is used, those settlements were in fact advances on the individual's inheritance. "Dowries" and property a spouse may have acquired through his or her own efforts were rarely put in the common pot. The community was limited to assets acquired after marriage (*communauté réduite aux acquêts*). The values have been calculated from the ones reported in the marriage contracts. Assets in the form of real estate are also exceedingly rare.

other on an analysis of the composition of the entrepreneurial families found in the 1881 and 1911 census enumerators' books.

The two cohorts are made of couples including at least one spouse belonging to a Tourcoing entrepreneurial family, who married between 1820 and 1829, and between 1859 and 1868, who continued residing in Tourcoing after their marriage, and who were entrepreneurs for at least part of their married life (some people failed and never regained their footing). The 1820-29 period was chosen because it corresponds to the post-Napoleonic period recovery. The second is made of couple whose reproductive life ended before the Civil registers of Births, Marriages and Deaths cease to be accessible (only civil records 100 years or more are accessible). The couples forming the two cohorts were identified from two sources. First, the Tourcoing record of marriage (in France, only civil marriages are legal; people who want a religious ceremony must first get married at the town hall). The civil records were supplemented by the registry of marriage contracts (the law also required marriage contracts, if there were any, to be registered) (AND 3Q538-2 and -5). Unfortunately, after 1865, they are not registered separately, but lumped together with every other civil document that must legally be registered, which makes finding them very difficult. The marriage contract registry provides additional information: type of matrimonial regime, value of property brought into marriage. They also allow us to identify men who married a non Tourcoing resident, and then brought her home: marriages were customarily celebrated in the bride's place of residence. The occupation of the bride, groom or their parents at the time of marriage determined whether they belonged to entrepreneurial families Occupations are one of the information systematically included in the marriage acts; people without an occupation are listed as "sans profession" – without occupation. This collecting yielded 127 couples in the first cohort, and 166 in the second one.

Next, the list of couples was compared with a series of other sources: the business tax rolls (matrices de patentes), the partnership registration books at the *Tribunal de commerce* (Business Court – partnership registration was also required by law); two series of city directories, starting in 1829 (l'*Almanach du commerce, des arts et métiers des villes de Lille, Armentières, Roubaix et Tourcoing de Vanackère* 1829-55 and *Annuaire de l'arrondissement de Lille de Ravet-Anceau* 1852-1914), the population table for 1820-1836; and the censuses of 1851 and 1881. The comparison makes it possible to identify the couples who married in Tourcoing but never lived there (N= 15 and 28). In almost all the cases, those were couples involving a Tourcoing bride, and a groom from the outside. A few couples left after a short residence in Tourcoing. In the first cohort, two couples left after the birth of their first child, and one after the birth of two children. Such departures are more numerous in the second cohort (N=13). It seems that during the Second Empire, couples who did not do well in their business were less willing to stay in Tourcoing. For instance, Fleurisse

Duvillier, an iron smelter, became a coal merchant and then disappeared. Much later, a marginal note in two of his children's birth records indicates they married in Paris. Perhaps he found a position as manager of some iron works there. Others may have used business as stepping stone. Gustave Brunet was a *clerc de notaire* (an assistant lawyer) when he married. He became a merchant trader immediately afterwards. A few years later, he was a *notaire* in one of the surrounding market town. As one had to buy a *notaire*'s practice, his foray into business may not have been intended to be permanent, but to last long enough to raise the necessary funds. The comparison between the two lists and the other sources also makes it possible to identify couples, who although from entrepreneurial families, were never entrepreneurs themselves. They have been eliminated too (N= 21 and 12). Those belonging to the first cohort became master craftsmen or professionals; in the second cohort, they became civil servants, professionals, or landlords. Finally, the couples involving a remarrying widow were also eliminated (N= 3 and 7). The cohorts now include 83 and 104 couples.

The second step consists in finding all the births relative to those couples in the civil registry (Births had to be registered at the town hall within three days). This could at first look like an impossible task. In such a densely populated region as the arrondissement de Lille, can one assume that couples spent their entire life in a single town? Shouldn't we comb the civil records of all the neighbouring towns as well? Fortunately, no, as this socio-economic group was particularly unwilling to move. Regional historians have noted that the bourgeoisie of the arrondissement was highly socially and geographically segmented, as well as endogamous, and the sources used here do not give them the lie[6]. Those people married each other, and once married took root somewhere. The region was a mosaic of micro societies whose social horizons were rather limited. The 1820-36 population table allows us to follow couples over a rather long period. In 1820, there were 234 households headed by an entrepreneur. Slightly less than 10% left in the next 16 years (N=22 or 9.4%, including 4 who were not native of Tourcoing). None of those couples belong to our cohort. Eleven households included at least one child born outside Tourcoing (4.7%), and in only 6 cases (2.6%) the father was Tourcoing born. In 1911, according to the census, not much had changed. Very few couples including at least one Tourcoing born head had a child born outside the town (less than 10% of the couples and less than 10% of the children). When both spouses were Tourcoing

[6] Lambert-Dansette (1954 : 720) characterized Armentières in the nineteenth century in those terms : « La vie de société, le train familial, les distractions, presque toute la vie sociale de la famille patronale était au siècle dernier axée sur un sens profond de la cité. L'existence se déroulait essentiellement et avant tout dans les limites de la ville » (Social life, family activities, entertainments, almost the entire social life of the family were in the last century centered on a deep identification with the city. Life unfolded primarily and preferably within the town's boundaries). This identification with the town obviously also characterized Tourcoing.

born, the percentages dropped to 2.3% of the couples and less than 1% of the children. Couples therefore moved very little, and the risks of not finding all the births using only the Tourcoing civil register are very low. The overall margin of errors is small and not likely to affect results.

A closer examination of the two cohorts is reassuring. Only two couples from the first cohort have more children in the census or in the genealogies than in our birth data (they have been eliminated). And we know the date at which the first spouse died for all the couples except three. In two cases, it is unlikely any birth was overlooked, as they had 12 and 14 children, at predictable intervals. The last one was found in the population table till 1836 and in the 1840 tax rolls. At that date, his wife was 46.

The data for the second cohort is almost as good. Only four families have more children in the genealogies or census than in our data (also eliminated). The date of the end of marriage through the death of one of the spouse is known in 63 out of the 102 remaining couples. The problem of course, is that the post-1904 registers were not available when the data was collected for this study, and lots of people died after that date. However, what we really need to know is not when people died, but whether both spouses were still alive when the wife celebrated her 45 birthday. We can use the 1881 and 1911 census for this purpose. They allow us to determine that 21 additional families were indeed complete families. In 12 cases, this is corroborated by the genealogies in the *Annuaire des familles*. The *Annuaire* also provide death dates for an additional 5 couples, who were too young in 1881, and are not found in the 1911 census. As for the remaining couples, they include a Tourcoing born male head (therefore they were not very mobile), and are found in the tax rolls till the end of the century. One can therefore assume without too many risks of errors that those couples spent their entire life in Tourcoing, and that all their children were born there.

Demographic behaviour

Age at first marriage

This population married relatively late, and the female age at marriage remained fairly high.

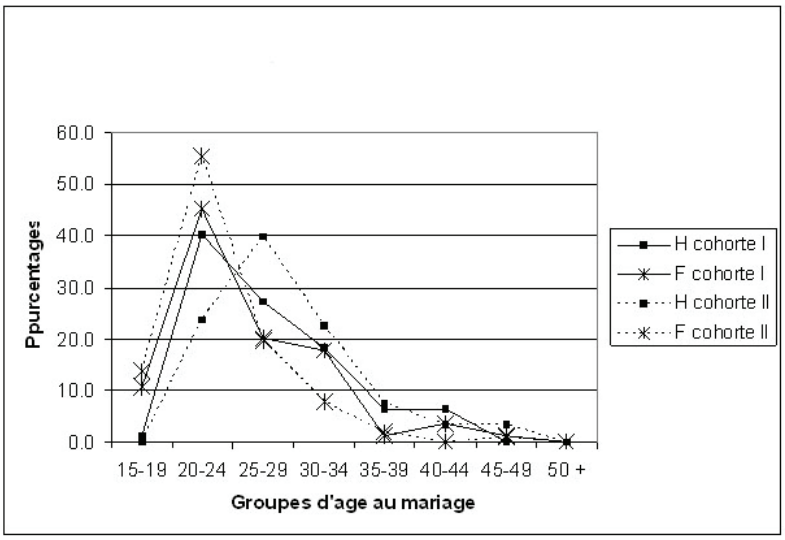
The comparison with the Roubaix families studied by Chantal Pétillon suggests that the Tourquennois married at a about the same age than the Roubaisiens between 1820 and 1829. The men who married between 1859 and 1868 were about a year younger and the women a year and a half older. However, the women's age at marriage dropped steadily in Roubaix after that date, whereas the men's age remained relatively unchanged (Pétillon 2006: 175). The situation in the two towns were therefore comparable. The distribution of

the spouses according to their age at marriage (figure 1) is without surprise: the men almost never married before 20, and rarely after 35, and women married mostly between 20 and 30.

Tab. 1: Age at first marriage

		Men	Women
Complete and incomplete unions only	First cohort	25.0	25.4
	Second cohort	28.8	23.7

Fig. 1: Age au mariage, selon le sexe et la cohorte



Fertility

The first cohort is composed of relatively large families, and the majority of women bore children until their early forties. However, six children in twenty years is below natural fertility rates. The second cohort is interesting, because the average number of children had dropped by almost two, and fewer than one woman in five had a child past age 40. The age at last birth also dropped significantly, from 39 to 34. A last child at 34 suggests that couple deliberately stopped having children.

Tab. 2: Average number of children; completed families

	N	No children	Average Number of children	Average age of the mother at the last birth	% of women who did not have children past 30	% of women who had a child at 40 or later
Cohort I	47	3	6.4	38.9	8.5	63.8
Cohort II	70	2	4.7	33.9	18.6	20.0

The fertility rates have been calculated in terms of the women's age at marriage and duration of unions (measured in five year periods). Fertility was more a matter of the length of union than of the woman's age. The first cohort's fertility graph lines are still slightly convex. The second cohort's on the other hand are clearly concave (figure 2 and 3). As the numbers of completed families are small, I also calculated the fertility rates of all women, eliminating the children born during truncated groups of periods of marriage (figures 4 and 5). The graphs have the same overall profile: the demographic behavior of those women during their shortened conjugal life was about the same as the one of the other women. However, one should not over-generalize. In neither cohort were all couples behaving in identical ways. Next to very small families that clearly reflect deliberate attempts at limiting the number of their children, there were others who as clearly were letting nature run its course. However, the proportion of the latter diminished. Large families were getting less common (see figure 6).

Was high fertility a characteristic of the *grande bourgeoisie*, of those « families that set the tone » as Daumas called them? Determining who those leading families were is not easy. I used two criteria. The first one is the value of the assets they brought into marriage (but as mentioned earlier, the data is available only until 1865). Those whose dowries were above average were kept. The other criterion is ownership of a spinning mill. Spinning was the first phase of textile production to mechanize. Spinners were also the most likely to built integrated industrial complexes, combining different phases of production. Spinners were genuine captains of industry, and among the pioneers of the industrial revolution in the area. They were not the only dynamic entrepreneurs: carpet makers, wool combers, industrial dyers, machine builders, manufacturers of chemicals also had to keep up with technological changes in their trade, but they are much fewer in number and thus less useful for our purpose.

Fig. 2: Fertility rates – completed families
first cohort

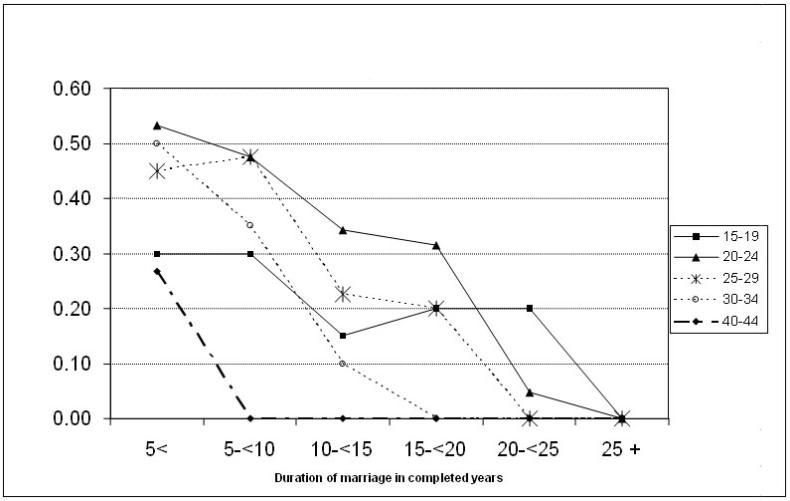


Fig. 3: Fertility rates – completed families
second cohort

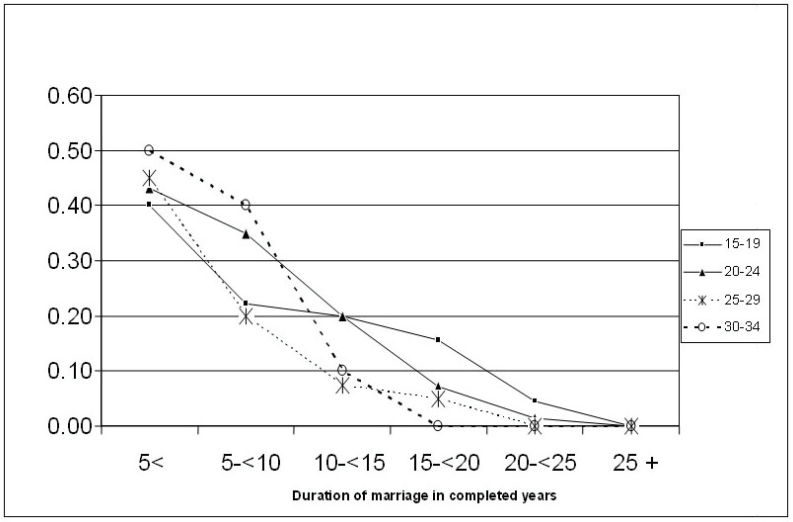


Fig. 4: Fertility rate – all families
first cohort

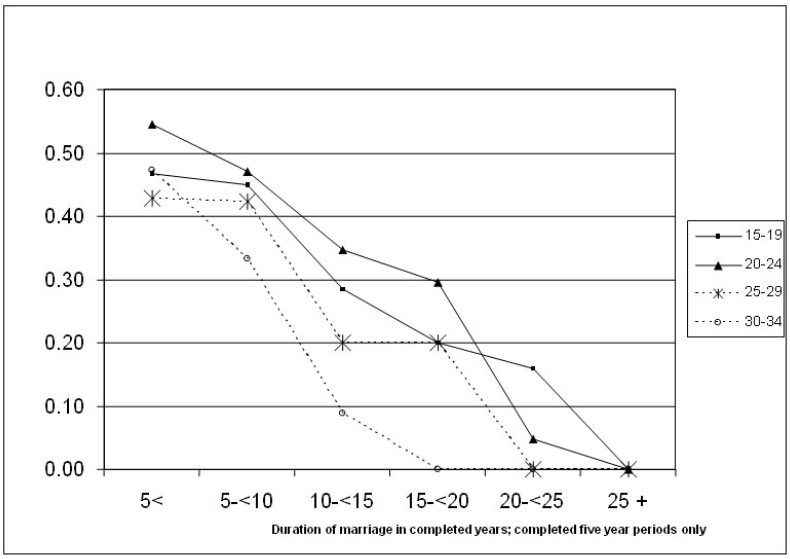


Fig. 5: Fertility rate – all families
second cohort

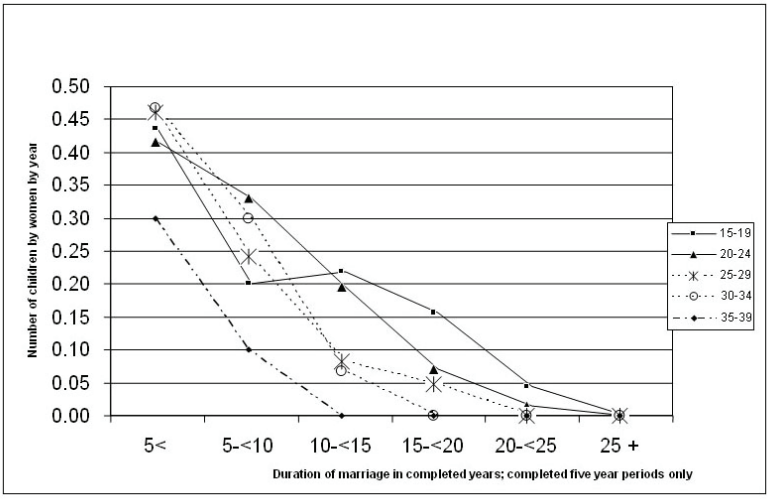
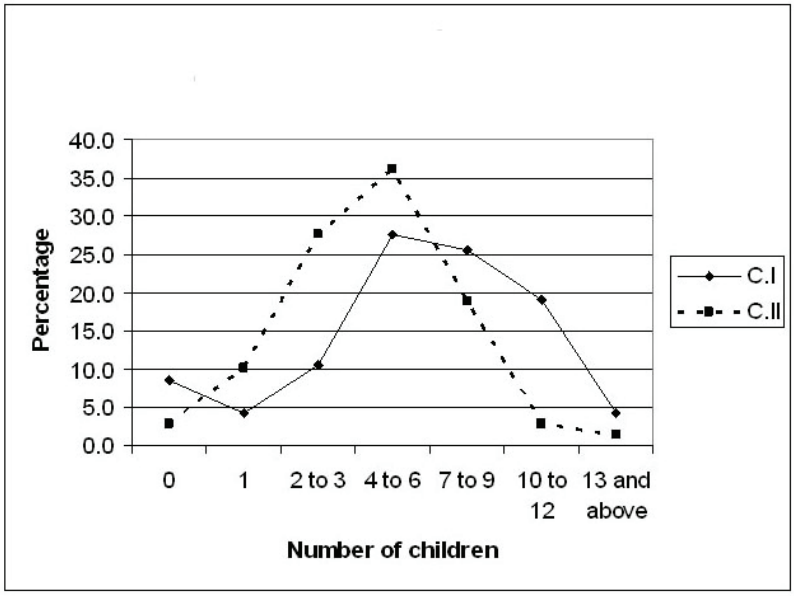


Fig. 6: Distribution of families, by number of children



There were only 8 complete families among members of the first cohort who had above average dowries, and 12 among the spinners. The wealthy families could be of any size (1, 1, 3, 5, 5 6, 11, 13 - average 5.6). The spinners on the other hand had an average of 9 children; all the women, except two had their last child at 41 or more. The second cohort includes 14 wealthy complete families and 12 completed families headed by spinners (two belong to both, whereas there had been no overlap among the first cohort). The behaviour of the wealthy couples is almost identical to the one of the entire cohort. The main difference is the age at marriage: those people marry slightly earlier, especially the men: 25.3 for the man and 22.3 for the women. The women have their last child on the average at 33.9, and they have an average of 5 children. Their lower age at marriage alone could explain their additional child (or rather fraction of child). The spinners on the other hand differ more from the rest of the cohort. The women marry at an even younger age (21.8). The men are slightly younger than the second cohort's groom, but older than the wealthier men (26.7). The women have their last child at a slightly older age (34.7). This lengthening of their reproductive life (by 3 years) allows them to have two more children than the average (6.6). Nonetheless this occupational category follows the general trend; in the second cohort, they have fewer children than their counterparts in the first cohort, and they have the last child earlier.

Tab. 3: Characteristics of wealthy families and spinners' families – second cohort

	N	Age at mg. men	Age at mg. women	N children	Age women at last birth
Couples with assets at marriage exceeding 40 000Fr	14	25.3	22.3	5.0	33.9
Spinners	10	26.7	21.8	6.6	34.7
All complete families	84	28.8	23.7	4.7	33.9

Are spinners more "representative" of the more dynamic segment of the industrial bourgeoisie? Did industrial modernity and larger families go hand in hand? It would probably be premature to reach this conclusion. To begin with, a 12 member cohort is very small. If we remove from it the one family that had 14 children, all the averages are similar to the one of the entire second cohort. Secondly, one can find very small families among very dynamic entrepreneurs. The Flemish Felix Vanoutryve had the largest manufacture of upholstery material in Tourcoing in 1882 (700 power looms), and had no reason to be envious of the Dewavrin or Desurmont spinning mills[7]. His only child, a son, married into a leading family, the Masurel, in 1884. The Binets are another case in point. Adolphe Binet operated the largest wool combing mill in town in 1882 (39 machines). After his death, his five children (four sons, one daughter) turned the firm into a *société en commandite* (limited liability partnership)called *Les fils de A. Binet*, and in 1896 were the first Tourcoing industrial family to transform their firm into a share holding society, the « *Peignage de la Tossée* », which lasted till the beginning of the twenty first century. This firm was heavily capitalized (3 millions of Francs). In 1896, it included a wool combing plant, a soap making factory, and also manufactured chemicals. Neither Vanoutryve, nor Binet had large families. It would therefore be imprudent to assume natalism was a necessary component of industrial capitalist *mentalité*. It does not go without saying that creating children and new factories went hand in hand.

[7] I have used the year 1882 as the base of comparison, because the majority of the grooms from the industrial middle class so not appear in the business tax rolls after their marriage, but a good fifteen years afterwards. It may have been customary for a father to provide his son with a factory when he married, but this does not seem to have included the deed to the property.

End of the century

Our second cohort married in the middle of the century. Pétillon and Smith's work suggest that family size increased at the end of the century, or at the beginning of the twentieth. It is not yet possible to use civil registry data to verify whether this was true of the Tourcoing industrial bourgeoisie. However, the census allows us to determine the direction of the general trend. To do so, I collected the census data on all manufacturers (as defined above) on the 1881 and 1911 census. Next, I estimated the marriage age of the mother, and the duration of marriage using the age of the eldest child listed (age of eldest + 1 = estimated duration of marriage; census age of mother less estimated length of marriage = estimated age at marriage). The results are of course approximations: the real eldest may have died or left home already. The latter possibility is however less likely in the case of couples married 20 years or less. Then, I calculated the average number of children for each category. Here again, the results are approximations: dead children are not listed, and infants may have been sent to a wet nurse. This phenomenon was not insignificant: the age distribution of this subpopulation reveals a significant deficit of infants under one year[8] . Nonetheless, the average number of children of women who had been married married for 10-20 years and were aged 35-45 is 4.7. Those are the women who correspond to our second cohort. They are also the ones least likely to have an infant at the wet nurse, and most likely to have all their surviving children still living at home. The census appears than to provide us with reliable data, especially for women towards the end of their reproductive life.

Tab. 4: Distribution of children of manufacturers living with their parents

1881 census							
Age	<1	1-4	5-9	10-14	15-19	20-24	Total
N	27	207	280	216	179	97	1006
%	2.7	20.6	27.8	21.5	17.8	9.6	
1911 census							
Age	<1	1-4	5-9	10-14	15-19	20-24	Total
N	33	198	256	258	184	78	1007
%	3.3	19.7	25.4	25.6	18.3	7.7	

[8] If we assume children under one should represent at least 1/5 of all the children under five, it is obvious that a lot of infants are missing: they represent 11% of the 0-5 cohort in 1881 and 13% in 1911.

Tab. 5: Average number of children living with their parents, according to the age of the mother at marriage and the length of union – 1881

Estimated age at marriage	Estimated length of union						
	<5	5-9	10-14	15-19	20-24	25-29	Number of couples in category
15-19	-	2.7	4.7	6.8	6	-	20
20-24	1.5	2.7	3.7	4.7	4.8	4.1	134
25-29	1.4	3.7	4	4.6	5	3	71
30-34	1	2.8	4.2	2.5	2.5	3.7	26
35-39	-	2	2	2	3.2	2	12
40-44	-	-	1	-	1	-	3
Average according to estimated length of union	1.5	3.0	3.8	4.7	4.3	3.6	
Number of couples in category	48	58	54	43	45	18	263

Tab. 6: Average number of children living with their parents, according to the age of the mother at marriage and the length of union – 1911

Estimated age at marriage	Estimated length of union						
	<5	5-9	10-14	15-19	20-24	25-29	Number of couples in category
15-19	1.5	2.7	3.8	3	1.7	2	25
20-24	1.3	3	3.9	4.9	4.7	3.3	149
25-29	1.5	2.4	4.4	3.1	4.7	3.7	82
30-34	1.5	2.5	1.8	4.2	2.7	2	36
35-39	1	2	-	-	2.3	1.3	14
40-44	-	1	0	1	3.8	3.0	6
Average according to estimated length of union	1.4	2.7	3.7	3.9	3.8	3.0	
Number of couples in category	39	48	43	51	36	20	306

Average numbers of children according to estimated age at marriage were diminishing for all subgroups, but especially among women married for 15-19 years. (After 20 years of marriage, one should expect that women had fewer children at home). In 1881, the women married for 15-19 years had an average of 4.7 children; in 1911, this average had fallen to 3.8, and the number of children at home leveled off after 10 years of marriage. These results do not support the thesis of a fertility rise at the beginning of the twentieth century. Instead, they suggest an increasingly "Malthusian" behaviour characterized by a constant lowering of the age at last birth. The trend uncovered in section IV appears to have continued to World War One.

Catholics and malthusians?

The results above do not allow us to conclude that manufacturers had more children at the end of the nineteenth century than at the beginning; neither do they allow us to conclude fertility was high but stable. In this socio-economic category, women had fewer and fewer children, and ceased to bear them at a younger and younger age. How can one reconcile those findings with this group's Catholicism? Is Catholicism not tantamount to large families?

In fact, the Catholic Church has never been particularly natalist, even if some claiming to obey its pronouncements pretended that God wanted couples to have as many children as possible. Their reasons were usually more political than theological. One thinks for instance of nineteenth and early twentieth century Quebec Clergy, bent on a "Revenge of the cradles", and threatening women who did not have a child every other year with hell and damnation; or, closer to our topic, the French Right at the beginning of the twentieth century, especially after the Great War (Thébaud 1985; Reggiano 1996). In both cases, one had to outbreed the enemy (Anglo-protestants or Germans). The *Assemblées générales des catholiques du Nord-Pas de Calais* on the other hand paid scant attention to neo-Malthusianism. They addressed the issue only three times between 1905 and 1912. In 1905 and 1906, neo-Malthusianism was discussed within the framework of a session on "public immorality" (Comptes rendus 1905: 343). The 1909 meeting paid it hardly more attention, despite its theme being "the family", and a day devoted to the "enemies of the family" and to the ways of fighting them. During the morning session, neo-Malthusianism was depicted as one of the offspring of Free-masonry. In the afternoon, it reappeared among a long list of threats: free love, divorce, births out of wedlock, prostitution, absence of testamentary freedom, "rights of children" theory, bad books, alcoholism, and factory work. Neo-Malthusianism was never discussed on it own, and it seems that the presenters were more scandalized by the techniques advocated by the neo-Malthusians (which "filled the hospitals with victims") than by their results (Comptes rendus 1909: 312, 338, 350). The 1909

meeting clearly shows that the Catholics of the Nord-Pas de Calais, and the clergy that guided them were more preoccupied with the quality of the little Catholics than with their numbers.

The Church condemned the use of "artificial" contraceptive as well as withdrawal (Stengers 1971: 406). It had never disapproved mutually agreed abstinence. Saint Augustine had said that once the desired number of children was achieved, couples should cease all sexual activities. Periodic abstinence had been endorsed by the Sacrée Pénitencerie as early as 1880 (Noonan 1986; Stengers 1971). Unfortunately, as scientists did not know when a woman's fertile was, the results left a lot to be desired. Later, the Church did not condemn the (more effective) Ogino method either (Smulders 1933; Noonan 1986). It was therefore possible to limit the size of one's family and remain a good Catholic as long as one did not use methods condemned by the Church.

How did our couple reduce their fertility? The sources say absolutely nothing about this; those were not topics one discussed in public. They could follow Saint Augustine's injunction and stop having sex altogether (Brundage 1987: 89-90). Individuals who had been taught since puberty to distrust their sexuality, to view physical attraction to another person as a sign of moral weakness, and who had been admonished repeatedly to aspire to "purity" can very well have put an end to their sexual activity with relief, whatever their sex. They were no longer torn between their nature and their sense of morality. Withdrawal was another option. It was condemned by the Church, but in France, the hierarchy enjoined priests not to ask questions (Stengers 1971: 424, 426, 438-48). It was better not to inform the husbands that the practice was prohibited, and let them engage innocently in it. Otherwise, there was a chance they would refuse to put an end to it, consciously sin, and stop coming to confession (Stengers 1971: 458-459; Noonan 1986: 401-403)[9]. Husbands who did not want to know could therefore easily not know and use withdrawal in all innocence. There were then means to limit fertility, and continue to think one was a good Catholic.

[9] This is the concept of « good faith » reasserted as late as 1892 in P. Berthier's *Abrégé de théologie moral et dogmatique*: »Si le mari est dans la bonne foi, du moins au sujet de la gravité de son acte, il vaut mieux que la femme s'abstienne d'user de conseils et de prières qui, en voulant le détourner de son forfait, lui en révèleraient la gravité » (If the husband is in good faith at least as to the seriousness of his actions, it is better that the wife refrains from using of advice and prayers which, attempting to steer him away from his misdeed, would alert him as to its seriousness). (1892: 595 quoted by Stengers (1971: 454; also see Noonan 1986: 401-403). The confessors' silence led couples to believe that all was permissible within marriage, and the more widespread this belief was, the more confessors feared to ask questions (Stengers 1971 : 458-459).

Why limit births?

One could attribute the behaviour of the Tourcoing manufacturers to some *Zeitgeist*: Natality had been dropping in France since the beginning of the nineteenth century (and in some parts of it, since the eighteenth). However, broad trends should not lead us to overlook causes specific to the region or to this particular socio-economic group. Other factors can have played a role: the decline in infant mortality, the overall enrichment of this group, and the emergence of real firms, in the sense of entities capable of surviving the death of their owner.

Infant mortality

The fertility decline was paralleled by an equally significant drop in infant mortality. The first cohort women (complete and incomplete families) gave birth to 455 live and 6 dead children (still birth = 3.4% of all births). 65 of those children (14.3%) are known to have died before their first birthday, and another 57 between their first and fifth birthday (12.5%). Therefore at least one quarter of the children do not celebrate their fifth birthday. Second cohort women gave birth to 498 live and 8 dead children (1.6%). 33 died before their first birthday (6.7%) and an additional 34 before the fifth, which means only 13.5% of the children are known to have died before age five. Wet nursing makes the figures for the death of children under one uncertain. However, the figures for the other two groups (still birth and 1-4) decline in the same proportion. Women in the second cohort were twice less likely to deliver a dead child, and probably twice less likely to loose a child in the first five years of his or her life.

It is difficult to determine if women had fewer children because they lost fewer or the reverse, and the two explanations are not mutually exclusive. The local practice to give the next child of the same sex the names of the one who had died can suggest that the death of a young child could lead to a replacement pregnancy. Couples then may have had fewer children because they were surviving more; they wanted to have a predetermined number of children, and when they reached this number, they stopped – but may have another one if they lost one while the wife was still fertile. And if we adjust the number of children born to women of the two cohorts to account for the mortality of infants and young children, we find that first cohort couples survived 4.8 children to age five, and second couple cohort 4.1. The gap between the final complete family size of the two cohorts has narrowed.

Secondly, after the middle of the century, the manufacturers were no longer born to craftsmen, merchants and wealthy farmers like most of their parent and grandparents. They were also considerably richer, and indulged in a lifestyle appropriate to their income. More and more had servants. In 1820, 13.4% of the manufacturers' households listed in the table of population had one servant, and none had more than two. In 1881, 73% had at least one, 24% had 2 and 2% more than two. In 1911, 65% had at least one, 22 % had two and 12% had more than two. When the servants were more numerous, they were more specialized, and suggest rather high living, if not gentrification. In 1881, the only coachmen were found in the household of a brewer, and were more likely to be brewery workers. The only governess, a middle aged French woman, was living with Denis Frys, a widower with eight children. On 1911, 20 households (out of 460) had at least one of the following: chauffeur, coachman, wet-nurse, English or German governess, chamber maid, valet, gardener and concierge. Most of those households belonged to Tourcoing Gotha. The industrialist Jules Dassonville and his wife had a one year old baby, a child's nurse, a cook, a chamber maid, a chauffeur – and a car. George Desurmont, another industrialist had six children age 5 to 18, a valet, a cook, a chamber maid and a German governess. The widowed Felix Vanoutryve lived "alone" with a valet, a chamber maid, a cook, a gardener and a janitor. Three quarter of those twenty households had three children or less, and the age of the heads does not explain the size of their family. Were wealth and family size inversely proportional?

We can try to answer that question by comparing industrialists with the members of the socio-economic group from which they emerged at the beginning of the nineteenth century: the craftsmen, merchants and traders. This is a more geographically mobile population than the manufacturers and industrialists, and following them in the civil registers after mid-century would be problematic. I used systematic samples from three census years: 1851, 1886 and 1911 (one in five for 1851 and 1886 and one in 20 for 1911)[10]. The details of the samples are found in table 7.

[10] The first two samples had been collected for previous studies about Tourcoing hence the use of 1886 instead of 1881.

Tab. 7

	1851	1886	1911
sample size	1 in 5	1 in 10	1 in 20
Total number of households in sample	1062	1145	920
Total number of individuals in sample	5345	5555	3382
Average household size in sample	5.0	4.9	3.7
Number of households headed by a crafts-man or trader	155	242	136
% crafstmen and traders	14.6	21.1	14.8

The three cohorts are noticeably different. In 1851, women who had been married at least fifteen years did not have more children than those married 10-15 years. In 1886, they did (but their numbers are very small). The ones married for less than 20 years had about the same number of children as contemporary manufacturers' wives in the same categories. The difference between 1886 and 1911 is more pronounced. In 1911, women had fewer children no matter how log they had been married or what age they had married than the ones in the previous cohorts. They also had significantly fewer children than their better off distant cousins. If wealth led to smaller families, it was obviously not the only factor, and petty bourgeois couples had even fewer children.

Tab. 8: Average number of children by age at mg and duration of mg-1851 – wife under 50 only

Estimated age at mg	Estimated duration of mg					
	<5	5-<10	10-<15	15-<20	20-<25	N of couples in category
15-19	1	3	3.5	3	2.7	9
20-24	1.4	2.6	4.3	5.5	8.5	28
25-29	1.6	2.6	4	3	3.6	31
30-34	1	3.0	2.5	2.5		11
35-39	2	2	4.5			6
average	1.4	2.6	4.0	3.6	4.3	
N of couples in category	16	21	24	14	10	85

Tab. 9: Average number of children by age at mg and duration of mg-1886 – wife under 50 only

Estimated age at mg	Estimated duration of mg						
	<5	5-<10	10-<15	15-<20	20-<25	24-<30	N of couples in category
15-19	1.5	1.75	4	3.5	7	4.5	13
20-24	1.7	2.7	4.3	5.1	8.3		46
25-29	1.6	3.3	3.4	4.4	5.3		40
30-34	1.9	2.5	5	3			7
35-39	1						2
40-44		2.5					2
average	1.6	2.8	4.0	4.5	6.9	4.5	
N of couples in category	25	28	29	19	7	2	110

Tab. 10: Average number of children by age at mg and duration of mg-1886 – wife under 50 only

Estimated age at mg	Estimated duration of mg						
	<5	5-<10	10-<15	15-<20	20-<25	24-<30	N of couples in category
15-19	1		1.5	1.5	3		7
20-24	1	1.7	2.9	3	4.5	3	33
25-29	1		2.3	3.4	3.4		21
30-34	1.5	2.3	2.3	2.75			12
35-39		1					1
40-44	1						1
average	1.1	1.8	2.5	2.9	4	3	
N of couples in category	10	11	19	19	14	2	75

A third factor may explain the demographic behaviour of the Tourcoing middle class: the changes in the organization of production. As Patrick Verley stated « Le nombre élevé des enfants aurait pu apparaître comme un élément d'émiettement du patrimoine par les successions et donc de dissolution de l'identité de l'entreprise. »[11]. In this region, the Civil Code requirements of equal inheritance continued similar pre-revolutionary practices dictated by the Custumals (customary law codes). Many children then threatened the survival of the firm. According to Verley, large families had a choice between two alternatives. One was « le maintien du patrimoine en indivision dans une entreprise unique évoluant … vers une forme de société de capitaux dépersonnalisée» [12] . The other was the « modèle Motte ». Among the Motte of Roubaix and among those who adopted their solution « le développement se fit par générations d'entreprises nouvelles qui réalisaient l'intégration au niveau du groupe familial» [13]. The problem described by Verley was however one that emerged in the second half of the century. Until the Second Empire, there were families engaging in a range of business activities in Tourcoing, rather than forms. Doing business at the beginning of the century required little capital, and the bulk of it was not tied into buildings and machines, but consisted in stock and commercial paper, and social capital (reputation of the name, personal contacts) and know how were important. Social capital is unlimited. Merchant traders, and to a lesser extent out-putters in the 1830 and 1840s could establish a rather large number of children without excessive difficulties, especially in a context of rapid industrial growth. In the course of the century, the families who conducted businesses became families with a business, and soon families owning a factory. Once family fortunes derived from the possession of factories immobilizing larger and larger amounts of capital, strategies had to change. One could no longer launch children in life with a thousand francs and a good name. To give each son his own firm, it was better not to have too many of them, even if they could incorporate, like the Binet. Too few children however could also be a problem. What if the only son had no talent for business, and the daughter resisted marrying solely to provide her father with a successor. One needed a heir and a spare (or two), and as factories could support more than one family, there was no reason not to do so. Only the smallest businesses, the craft shops and the retail stores, could not support more than one family, and interestingly enough, the petty bourgeoisie had the smaller families at the end of out period.

[11] "A large number of children could have appeared to be a factor facilitating the fragmentation of the patrimony through inheritance, and thus threatening the identity of the firm".

[12] "The keeping of the patrimony in a jointly owned firm leading to an impersonal holding society."

[13] "Development took the form of generations of new firms which were integrated into a family conglomerate" (Verley 1994: 77; also see Bonte 2002: 45-46).

Conclusion

The case of the Tourcoing middle-class shows that Catholicism was not incompatible with attempts at limiting family size. The relatively low age of mothers at last birth suggests that once the optimal number of children had been reached, couples stopped having children. By the later part of the century, this optimal number was easier to reach because fewer children died young. Religious faith could however have slowed down the fertility decline: The petty middle class had even fewer children than their betters, and if they were similar to their colleagues in Lille, their religion was tepid or non existent.

Religion however is unlikely to be the sole, or even the main explanation for the demographic behaviour of the middle class. Economic factors obviously played an important role. Better off couples could afford to raise more children, were in a better position to establish them, and were able to leave an inheritance that could support more than one or two descendents. Family firms could, and were, co-owned and managed, and later in the century, could be turned into share holding societies. The petty middle class on the other hand contracted (1886-1911) after a period of growth (1851-86). In the period of expansion, this socio-economic category appears to have had more children (unless they survived more infants). They responded to subsequent reduced opportunities for their children to follow on their footsteps by having fewer of them. Beliefs could not trump parental caution.

References

Archives municipales de Tourcoing (AMTg): Fichier des entreprises; Matrices de patentes, 1840-1911; Registres d'état civil, 1820-1904; Table de population 1820-1836; Recensements, 1851, 1881, 1886, 1911.

Archives départmentales du Nord (ADN): Enregistrement des contrats de mariages, Tribunal de commerce, Actes de société, 1800-1905.

Almanach du commerce, des arts et métiers des villes de Lille, Armentières, Roubaix et Tourcoing. Lille: Vanackère, 1829-55.

Annuaire de l'arrondissement de Lille. Lille: Ravet-Anceau,1852-1914.

Annuaire des familles de Roubaix-Tourcoing. Lille: Ravet Anceau, 1912-1914.

Ariès, P. 1971. *Histoire des populations françaises*. Paris: le Seuil.

Assemblée générale des catholiques du Nord-Pas-de-Calais tenue à Lille du 13 au 19 novembre 1905. Lille: Librairie de l'œuvre de saint Charles, 104 rue de la Barre, 1905.

Bardet, J.-P. 1988. La chute de la fécondité. *Histoire de la population française*, vol. 3, sous la direction de Jacques Dupâquier. Paris: Presses universitaires de France.

Bonte, J. 2002. *Patrons Textiles. Un siècle de conduite des entreprises textiles à Roubaix-Tourcoing, 1900-2000*. Lille: Voix du Nord.

Brundage J. A. 1987. *Law, Sex, and Christian Society in Medieval Europe*, Chicago.
Chanut, A. 1956. La crise économique à Tourcoing, 1846-1850. *Revue du Nord* 38 (149): 77-105.
Cholvy, G. et Y.-M. Hilaire. 1985-88. *Histoire religieuse de la France contemporaine*. 3 vol. Toulouse: Reprint 2000.
Cholvy, G. 2001. *Christianisme et société en France au XIXe siècle, 1790-1914*. Paris
Codaccioni, F.-P. 1976. *De l'inégalité sociale dans une grande ville industrielle, le drame de Lille de 1850 à 1914*. Lille: Presses universitaires de Lille.
Daumas, J.-C. 2004. *Les territoires de la laine, histoire de l'industrie lainière en France au XIXe siècle*. Lille: Septentrion.
Daviet, J. P. 1987. Le complexe industriel de Roubaix Tourcoing et le marché de la laine, 1840-1950. *Revue du Nord* 54: 777-813.
Delsalle, P. 1985. *La brouette et la navette*. Dunkerque: Edition des beffrois.
Fohlen, C. 1956b. *L'industrie textile au temps du Second Empire*. Paris,
Fohlen, C., 1956a. Crise Textile et troubles sociaux, le Nord à la fin du Second Empire, *Revue du Nord*. XXXV: 107-124
Foley, S. K. 2004. *Women in France since 1789*. London: Palgrave Macmillan.
Hirsch, J.-P. 1991. *Les deux rêves du commerce; entreprise et institution dans la région lilloise, 1780-1860*. Paris: EHESS.
La famille. Comptes rendus de la XXXVIe Assemblée générale des catholiques du Nord-Pas-de-Calais, 8-14 novembre 1909. Lille: Ducoulombier, 1910.
Lambert-Dansette, J. 1954. *Quelques familles du patronat textile de Lille-Armentières, 1789-1914. Origines et évolution d'une bourgeoisie*. Lille: Raoust.
Landes, D. 1976. Religion and Enterprise: The Case of the French Textile Industry. In. *Enterprise and Entrepreneurs in 19th and 20th century France*, ed. Edward C. Carter II, Robert Foster and Joseph Moody, 41-86. Baltimore
LeGoff, J. et R. Rémond. 1991. *Du Roi très Chrétien à la laïcité républicaine. vol. 3 of Histoire de la France religieuse*. Paris
Lottin, A. 1986. *Histoire de Tourcoing*. Dunkerque: Edition des beffrois.
Ménager, B. 1983. *La vie politique dans le département du Nord de 1851 à 1877*. Thèse de doctorat, Lille, 3 vol.
Noonan, J.T. 1986, *Contraception, a history of its treatment by Catholic theologians and canonists*. Cambridge (Mass.): Harvard University Press, 2d. ed.
Pétillon, C. 1996. *La population de Roubaix (1740-1889), une croissance exceptionnelle*. Thèse de doctorat nouveau régime, Université de Lille III.
Pétillon, C. 2006. *La population de Roubaix, industrialisation, démographie et société, 1750-1880*. Lille: Septentrion.
Pierrard, P. 1978. *Les diocèses de Cambrai et Lille*. Paris: Beauchesne,
Pouchain, P. 1998. *Les maîtres du Nord du XIXe siècle à nos jours*. Paris: Librairie académique Perrin.
Reggiano, A. H. 1996. Procreating France: The politics of demography 1919-1945. *French Historical Studies* 19: 725-775.
Smith, B. 1981. *Ladies of the Leisure class, the bourgeoises of Northern France in the Nineteenth century*. Princeton: Princeton University Press.
Smith, B. 1989. *Les bourgeoises du Nord*. Paris: Librairie académique Perrin.

Smulders, J. N. J. 1933. *De la continence périodique dans le mariage*. Paris: Le Bouzey et Ané.
Stengers, J. 1971. Les pratiques anticonceptionnelles dans le mariage au XIXe siècle: problèmes humains et attitudes religieuses. *Revue Belge de Philologie et d'histoire* 49: 403-481.
Talmy, R. 1962. *L'association catholique des patrons du Nord. 1884-1895*. Lille: Facultés catholiques.
Thébaud, F. 1985. Le mouvement nataliste dans la France de l'entre deux guerre: L'alliance Nationale pour l'accroissement de la population française. *Revue d'histoire moderne et contemporaine* 32: 276-301.
Toulemonde, J. 1966a. L'industrie de Roubaix Tourcoing, *Revue du Nord* 48 (190): 321-336.
Toulemonde, J. 1966b. *Naissance d'une métropole, Histoire économique de Roubaix-Tourcoing au XIXe siècle*. Tourcoing: G. Frère.
Verley, P. 1994. *Entreprises et entrepreneurs du XVIIIe siècle au début du XXe siècle*. Paris: Hachette.
Visse, J-P. 2004. *La presse du Nord et du pas de Calais au temps de l'Écho du Nord, 1819-1945*. Lille: Septentrion.